

REMARKS

By this Amendment, claims 1, 3, 5, 18, and 26 are amended and claims 4 and 29-54 are canceled. Thus, claims 1, 3, 5-26, and 55 are pending in this application. Applicant respectfully requests reconsideration and prompt allowance of the pending claims at least in light of the following remarks.

The Office Action objects to claims 1, 3-29 and 39 for informalities. By this Amendment, claims 1, 3, 18, and 26 are amended to obviate the informalities. Claims 29 and 39 are canceled. Applicant respectfully requests withdrawal of the objections.

The Office Action provisionally rejects claims 1 and 33-55 for obviousness-type double patenting over claims 1-21 of copending U.S. Patent Application 11/032,141. Applicant respectfully submits that this rejection remains provisional as copending U.S. Patent Application 11/032,141 has not yet matured into a patent. If and when copending U.S. Patent Application 11/032,141 matures into a patent prior to the allowance of the pending claims, Applicant will address the rejection.

The Office Action rejects claims 1, 6, 7, 11-18, 22-26, 29-38, and 40-54 under 35 U.S.C. §103(a) over U.S. Patent No. 6,235,020 to Cheng et al. (hereinafter "Cheng") in view of U.S. Patent No. 5,067,953 to Feucht, and further in view of U.S. Patent No. 4,590,934 to Malis et al. (hereinafter "Malis")¹; rejects claim 39 under 35 U.S.C. §103(a) over Cheng, Feucht, and Malis, in view of U.S. Patent No. 6,288,081 to Goble²; and rejects claim 55 under

¹ Applicant notes that claims 3-38, 40-46, and 51-54 are rejected over what appears to be only Cheng on page 19 of the Office Action. However, this rejection relies on the rejection over Cheng, Feucht, and Malis, thus Applicant assumes that claims 3-38, 40-46, and 51-54 were intended to be rejected over Cheng, Feucht, and Malis.

² Applicant notes that claim 39 is rejected over what appears to be only Cheng and Goble on page 22 of the Office Action. However, this rejection relies on the rejection over Cheng, Feucht, and Malis, thus Applicant assumes that claim 39 was intended to be rejected over Cheng, Feucht, Malis, and Goble.

35 U.S.C. §103(a) over Cheng, Feucht, and Malis, in view of U.S. Patent No. 5,776,215 to Muri. Applicant respectfully traverses the rejections.

By this Amendment, Applicant cancels claims 29-54. Accordingly, the rejection of claims 29-54 is inconsistent with the pending claims.

Furthermore, Applicant amends claim 1 to include the features of canceled claim 4. Accordingly, claim 1, and claims 6, 7, 11-18, 22-26, and 55 that depend from claim 1, are patentable over Cheng, Feucht, Malis, Goble, and Muri for at least the reasons that claim 4 is patentable, as well as for the additional features they recite. Applicant respectfully requests withdrawal of the rejection.

The Office Action rejects claims 3-5, 8-10, 19-21, 27 and 28 under 35 U.S.C. §103(a) over Cheng, Feucht, and Malis, in view of U.S. Published Patent Application No. 2002/0165530 A1 to Harano et al. (hereinafter "Harano"). Applicant respectfully traverses the rejection.

By this Amendment, Applicant amends claim 1 to include the features of claim 4. In rejecting claim 4, the Office Action correctly recognizes that Cheng, Feucht, and Malis fail to disclose, teach, or suggest protection circuitry "responsive to application of a short circuit across the output lines, the protection circuitry being responsive to the said short circuit sufficiently quickly to disable the RF power device before the current passing therethrough rises to a rated maximum current as a result of the short circuit," as now recited in claim 1 and similarly recited in claim 27. However, Harano fails to make up for this deficiency of Cheng, Feucht, and Malis.

In particular, Harano simply discloses control circuit 28 that stops the output of the high-frequency power when the voltage is equal to or lower than a predetermined voltage. (paragraph [0067]). Importantly, Harano is silent with respect to the speed with which control circuit 28 is capable of stopping the high output power, and in particular, whether the

control circuit 28 may stop the power before the current passing therethrough rises to a rated maximum. Thus, Harano fails to disclose, teach, or suggest, protection circuitry "responsive to application of a short circuit across the output lines, the protection circuitry being responsive to the said short circuit sufficiently quickly to disable the RF power device before the current passing therethrough rises to a rated maximum current as a result of the short circuit" (emphasis added).

Furthermore, there is no teaching or suggestion in Harano, Cheng, Feucht, or Malis that the control circuit 28 of Harano may be used in a low output impedance device with a series resonant output circuit.

This feature of claims 1 and 27 is important to Applicant's claimed invention because of the particularly dangerous combination of a low output impedance device with a series resonant output circuit. As explained in detail on, for example, page 4, line 27 - page 5, line 17, of Applicant's specification, a sufficiently quick protection circuitry will prevent the effective short-circuit across the output lines, which would otherwise occur in a low output impedance device with a series resonant output circuit without such protection circuitry.

Because Harano, Cheng, Feucht, and Malis fail to disclose, teach, or suggest, protection circuitry responsive to application of a short circuit across the output lines, the protection circuitry being responsive to the said short circuit sufficiently quickly to disable the RF power device before the current passing therethrough rises to a rated maximum current as a result of the short circuit, claims 1 and 27 are patentable over Harano, Cheng, Feucht, and Malis. Further, claims 3-5, 8-10, 19-21, 27 and 28 are patentable for at least the reasons that claims 1 and 27 are patentable, as well as for the additional features they recite. Applicant respectfully requests withdrawal of the rejection.

In view of at least the foregoing, Applicant respectfully submits that this application is in condition for allowance. Applicant earnestly solicits favorable reconsideration and prompt allowance of the pending claims.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, Applicant invites the Examiner to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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